

Example 1: Determine the force of attraction between a 35 kg dog and a 7.6 kg cat, watching each other from a distance of 4.8 m.

$$F_g = \frac{G M m}{r^2}$$
$$= \frac{(6.67 \times 10^{-11}) (35) (7.6)}{4.8^2}$$

$$F_g = 7.7 \times 10^{-10} \text{ N}$$